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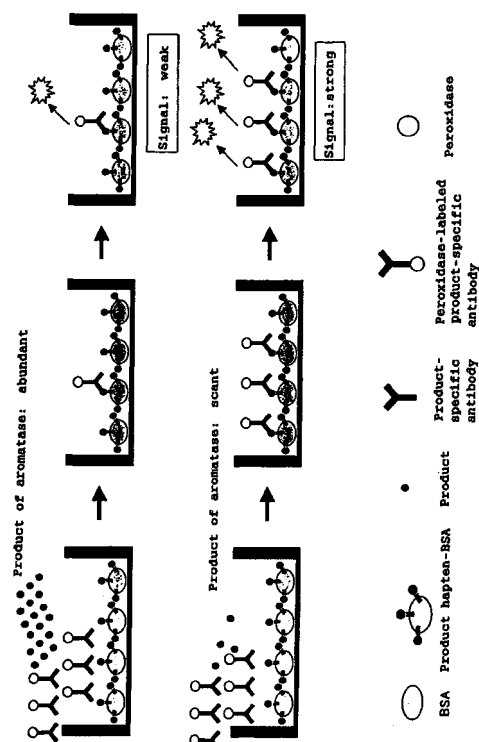
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(54) **Method of measuring drug-metabolizing enzyme activity, method of evaluating inhibition of drug-metabolizing enzyme activity, and composition for these methods**

(57) The present invention provides a method of measuring drug-metabolizing enzyme activity, wherein a drug-metabolizing enzyme is first applied to a substrate (particularly an endogenous unmodified substrate), and measurement is performed preferably within three hours by immunochemical assay of the resulting product.

Fig. 2





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EUROPEAN SEARCH REPORT

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
P,X	US 2003/100025 A1 (WARREN JAMES T ET AL) 29 May 2003 (2003-05-29) paragraphs [0009], [0010], [0035] - [0037], [0048] - [0050], example 7, claims 1 - 5	1-24, 32-35	G01N33/573 C12N9/02
X	EP 1 184 665 A (MEDICAL & BIOLOG LAB CO LTD) 6 March 2002 (2002-03-06) paragraphs [0008],[0011],[0014], [0029] - [0033], [0040] - [0042], [0048], [0049], Example 3, claims 2, 4, 12 - 15, 20	1-6, 14-19, 23,24, 32-35	
A	---	7-12, 25-31	
X	COLBERT A ET AL: "PHOSPHORYLATION STATE-SPECIFIC ELISA ALLOWS QUANTITATION OF KINASE ACTIVITY ON HUMAN TAU" ABSTRACTS OF THE SOCIETY FOR NEUROSCIENCE, SOCIETY FOR NEUROSCIENCE, WASHINGTON, DC, US, vol. 27, no. 1, 2001, page 1438 XP001124376 ISSN: 0190-5295 * abstract *	1-6, 14-19, 23,24, 32-35	TECHNICAL FIELDS SEARCHED (Int.Cl.7) G01N C12N
A	---	7-12, 25-31	
X	US 5 171 662 A (SHARMA SATISH K) 15 December 1992 (1992-12-15) abstract. col. 5, lines 6 - 17, col. 2, lines 30 - 47, col. 7, lines 13 - 52, example 1, claims 1 - 10	1-6, 14-19, 23,24, 32,35	
A	---	7-12, 25-31	
The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 5 December 2003	Examiner Hoesel, H
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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Office

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Application Number
EP 03 01 4486

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
A	HALBERSTADT JEREMY B ET AL: "A method to detect polysialic acid in polymers of 10 or more sialyl residues synthesized in vivo and in vitro" ANALYTICAL BIOCHEMISTRY, vol. 209, no. 1, 1993, pages 136-142, XP002264079 ISSN: 0003-2697 abstract, p.136, col. 2, line 27 - p. 137, col. 2, line 11, p. 138, col. 2, line 29 - p. 139, col. 2, line 11 ---	1-35	
A	US 5 300 630 A (MATSUURA HIDEMITSU ET AL) 5 April 1994 (1994-04-05) col. 4, lines 19 - col. 5, line 31, example 1 ---	1-35	
A	CHAT MIREILLE ET AL: "Drug metabolising enzyme activities and superoxide formation in primary and immortalized rat brain endothelial cells" LIFE SCIENCES, vol. 62, no. 2, 5 December 1998 (1998-12-05), pages 151-163, XP002264080 ISSN: 0024-3205 abstract, p. 153, line 42 - p 154, line 29 ---	1-35	
A	ZWAIN ISMAIL H ET AL: "Astrocytes cultured in vitro produce estradiol-17-beta and express aromatase cytochrome P-450 (P-450 AROM) mRNA" BIOCHIMICA ET BIOPHYSICA ACTA, vol. 1334, no. 2-3, 1997, pages 338-348, XP002264081 ISSN: 0006-3002 p. 340, item 2.6 "Radiometric aromatase assay" -----	1-35	
The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 5 December 2003	Examiner Hoesel, H
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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The members are as contained in the European Patent Office EDP file on
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05-12-2003

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2003100025 A1	29-05-2003	NONE	

EP 1184665 A	06-03-2002	JP 2000325086 A	28-11-2000
		EP 1184665 A1	06-03-2002
		WO 0072011 A1	30-11-2000

US 5171662 A	15-12-1992	NONE	

US 5300630 A	05-04-1994	US 5177015 A	05-01-1993
		CA 1339109 C	29-07-1997
		CA 1339622 C	06-01-1998
		EP 0354652 A2	14-02-1990
		JP 2276600 A	13-11-1990
